Claims

1. A spindle head for a machine tool comprising a motor-spindle unit arranged in the spindle head which a drive motor whose motor shaft is adapted to serve as a spindle to mount tools, workpieces or workpiece blanks, wherein the drive motor of the motor-spindle unit is able to slide in the axial direction in the spindle housing, and a compressible means is provided for resisting axial displacement of the drive motor into the spindle housing so that such compressible means holds the drive motor in its intended working position up to a predetermined axial force level.

2. The spindle head as set forth in claim 1, comprising as a compressible means at least one spacing element or spring element adapted to deform when predetermined axial force level is reached.

3. The spindle head as set forth in claim 2, wherein the compressible means is arranged between axially opposite faces of the spindle housing and of the drive motor of the motor-spindle unit.

4. The spindle head as set forth in claim 3, wherein the compressible means is constituted by an annular element encircling the drive motor.

5. The spindle head as set forth in claim 2, comprising at least one axially aligned holding screw holding the drive motor in the axial direction on the spindle housing, the head of such screw bearing against the compressible means.

6. The spindle head as set forth in claim 5, comprising a plurality of holding screws distributed about the periphery of the drive motor, each holding screw being provided with a compressible sleeve or said holding screws bearing against an intermediate annular element surrounding the drive motor.

7. The spindle head as set forth in claim 1, comprising a switching means responsive on deformation of the compressible means.

8. The spindle head as set forth in claim 7, comprising sensor means adapted to detect a relative axial movement between the drive motor and the spindle housing, such sensor means being adapted to cause operation of the switching means.

9. The spindle head as set forth in claim 8, wherein the drive motor is provided with a peripheral groove with a sensor element fitting into it, such sensor element being guided on the spindle housing, a radial displacement of the sensor element, caused by axial displacement of the drive motor, being linked with same for causing operation of the switching means.

10. The spindle head as set forth in claim 7, wherein the switching means is designed to switch off or reverse the spindle feed or the tool feed or to switch off the entire machine tool.